

## **REMARKS**

Claims 1-35 are now pending in the application. Claims 1-35 stand rejected. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

### **REJECTION UNDER 35 U.S.C. § 103**

Claims 1-35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Vanderaar et al. (U.S. App. Pub. No. 2002/0018527) in view of Gilhousen (U.S. Pat. No. 5,751,761). This rejection is respectfully traversed.

1. Regarding Claims 1-18, as amended, Claim 1 recites, "A communication system for mobile platforms, comprising: a first mobile platform including a first transceiver that is assigned a first Internet Protocol (IP) address; a second mobile platform including a second transceiver that is assigned a second IP address; and a ground station adapted to: transmit a forward link that contains an entire first IP packet having a first information data rate, said first IP packet modulated with code division multiple access (CDMA) coding in combination with a first variable length orthogonal (VLO) code such that said entire first IP packet can be relayed, via said forward link, from a ground station to said first mobile platform through a selected channel of a satellite having a transceiver amplifier operating approximately at a saturation point of said amplifier, and transmit said forward link concurrently containing an entire second IP packet simultaneously modulated with CDMA coding in combination with a second VLO code such that said entire second IP packet can be relayed, via said forward link, from said ground station to said second mobile platform through said selected satellite channel with said satellite transceiver operating approximately at said saturation point."

Applicant respectfully submits that neither Vanderaar et al. nor Gilhousen describe, show or suggest a communication system for a mobile platform that includes the limitations recited in amended Claim 1. For example, Applicant respectfully submits that neither Vanderaar et al. nor Gilhousen describe, show or suggest a communication system for a mobile platform that includes a ground station that transmits a forward link containing an entire first IP packet and an entire second IP packet, wherein the first and second packets are simultaneously modulated with code division multiple access

(CDMA) coding in combination with, respectively, a first VLO code and a second VLO code. Additionally, neither Vanderaar et al. nor Gilhousen describe, show or suggest such a communication system wherein the first and second IP packets are modulated such that the entire first and entire second modulated IP packets are transmitted from the ground station to the first and second mobile platforms via the forward link containing that is relayed through a selected satellite channel with a transceiver amplifier of the satellite operation at approximately the saturation point of the amplifier.

Rather, Vanderaar et al. describes a satellite-based architecture for dynamic assignment of links in a multi-user communication system. The architecture allows variable modulation and coding on a per-user basis through the use of time division multiplexing (TDM). Vanderaar et al. describes a system that primarily communicates using a single primary channel subdivided into sub-channels and transmits partial packets having a fixed number of bits in temporally divided time slots. One skilled in the art would understand that at higher data rates, the system of Vanderaar et al. requires a power backoff to avoid peak-to-average (PAR) problems. This power backoff will cause satellite transponder inefficiencies and a reduction in range and/or data rate for high data rate operation of the OFDM so that the transponder amplifier can not operate approximately at its saturation point. The present invention, as recited in amended Claim 1, overcomes PAR problems and the power backoff necessity by simultaneously modulating first and second IP packets using combined VLO and CDMA coding so that the first and second IP packets can be transmitted, via the forward link, to the first and second mobile platform through a single selected satellite channel operating at approximately the saturation point of the selected channel..

Additionally, Gilhousen describes a system for allocating a set of orthogonal PN code sequences of variable length among user channels operative at different data rates in a spread spectrum communications system.

Thus, neither Vanderaar et al. or Gilhousen describe, show or suggest simultaneously modulating first and second packets with code division multiple access (CDMA) coding in combination with a first VLO code and a second VLO code. Nor does either Vanderaar et al. or Gilhousen describe, show or suggest such a communication system wherein the first and second IP packets are modulated such that the entire first

and second IP packets are relayed, via the forward link, from the ground station to the first and second mobile platforms through the selected satellite channel with the satellite transceiver operating approximately at its saturation point

Therefore, for at least the reasons set forth above, Applicant respectfully submits that amended Claim 1 is patentable over Vanderaar et al. in view of Gilhousen.

Claims 2-18 depend from amended Claim 1. When the recitation of Claims 2-18 are considered in combination with the recitations of amended Claim 1, Applicant submits that Claims 2-18 are likewise patentable over Vanderaar et al. in view of Gilhousen.

2. Regarding Claims 19-35, Claim 19 has been amended to include limitations similar to the limitations recited in amended Claim 1. In accordance with the remarks set forth above with respect to amended Claim 1, Applicant respectfully submits that Claim 19 is also patentable over Vanderaar et al. in view of Gilhousen.

Claims 20-35 depend from amended Claim 19. When the recitation of Claims 20-35 are considered in combination with the recitations of amended Claim 19, Applicant submits that Claims 19-35 are likewise patentable over Vanderaar et al. in view of Gilhousen.

For at least the reasons set forth above, Applicant respectfully requests that the §103 rejections of Claims 1-35 be withdrawn.

**CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (314) 726-7525.

Respectfully submitted,

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